



Commercial Service Caribbean Region Jamaica

Fiber Optic Cable
Transmission Equipment

January, 2005

SUMMARY:

The liberalization of Jamaica's telecommunications sector has resulted in a flurry of activity over the past few years. This is most clearly demonstrated by the number of cell phones in use – which has exceeded preliminary projections several times over. There has also been growth in demand for other telecom related services as the inadequacies of the single submarine link for international communications had become increasingly obvious. In January 2005, licenses were granted for two additional submarine communications lines in Jamaica. This development will result in big reductions in telecommunications costs as well as improved efficiency. A further outcome will be accelerated demand for fiber-optic cable and related equipment used to build out and improve the telecommunications infrastructure.

MARKET OVERVIEW:

Jamaica privatized its telecommunications sector in the late 1980's and a gradual process was embarked on towards the full liberalization of the sector. In September 1999, the monopoly provider of telecommunications services, Cable and Wireless Jamaica (CWJ), signed an agreement with the government, which foresaw a 3-phase process of gradual liberalization. (Prior to the signed agreement, CWJ had a monopoly license, which would have locked telecommunications activities in Jamaica into that situation at least until 2013 renewable until 2038). The first phase of the regime saw the passage of new Telecommunications regulations and the licensing of new companies to provide cellular services. In the second phase, which started in September 2001, licensed operators were allowed to deliver telecom services over their own networks. Phase two (the final phase in liberalization) of that process began on March 1, 2003 and allows international communications to and from Jamaica.



The growth in the number of mobile phones in use is an example of the dramatic changes that have taken place in Jamaica's telecommunications sector. Prior to 2002, it was projected that Jamaica – with a total population of 2.6 million - had a market for about 500,000 cell phone users in total. However, by the end of 2004, the number of cell phone users in Jamaica was well over three times that figure. Digicel, the company with the largest market share, has over one million subscribers followed by CWJ (Wireless) and Oceanic Digital. Additionally, AT&T Wireless (Cingular) has also entered the market and it is expected that it will be focusing on Jamaica's tourist areas.

The successful liberalization of Jamaica's telecommunications sector has led to a restructuring of the market and demands for an ever-growing list of products and services. Since the beginning of the phased liberalization, some 375 carrier and service provider licenses have been granted. Over 70 of these have been licensed to provide international services. It has become increasingly evident that existing capacity – provided by the CWJ submarine link - is inadequate to meet the growing needs for international communications.

Following Jamaica's lead, the Cayman Islands has also taken steps to liberalize its telecom sector. A phased process of liberalization has also been embarked on. By the end of 2004, Cayman's population of approximately 40,000 was served by Cable and Wireless (Cayman), Digicel and AT&T Wireless (Cingular). The Cayman Islands is served by two submarine telecommunication cables, both of which use fiber optic technology: (1) Cayman-Jamaica Fiber System (CJFS) with nodes in Grand Cayman, Cayman Brac, and Jamaica; and (2) Maya 1 Fiber System with nodes in Florida, Mexico, Grand Cayman, Honduras, Costa Rica, Panama, and Colombia. There are proposals/plans to expand both the CJFS and Maya 1 systems.

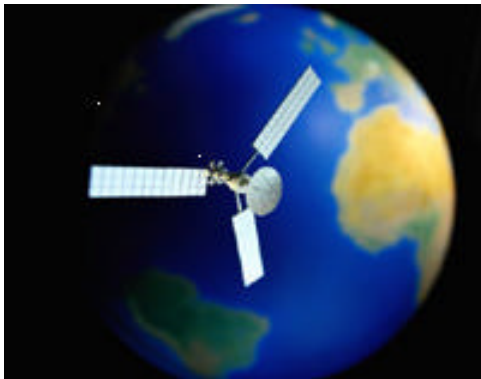
MARKET TRENDS:

The liberalized telecommunications landscape in Jamaica will create a much wider range of value-added products and services. The subscriber television industry, for example, may, through broadband capacity, exploit the opportunities for the provision of a range of services including high-speed Internet services and Voice Over Internet Protocol technologies. The cable industry, as it develops its broadband infrastructure, promises to deliver multimedia-video, voice, text, graphics - to both PCs and TV. Fixed wireless operators have the opportunity to carve out their own niches in the broadband market. As the technologies develop and become more widely available, it is to be expected that a number of cable operators who obtained telecommunications licenses under the first two phases of the liberalization process will be establishing an infrastructure to provide fixed line telephony as well as Internet services. They are also being encouraged to provide Internet access over cable.

There is rapid growth in domestic and international voice and data traffic generated from over 2.2 million (mobile and fixed) voice subscribers and over 600,000 users of the Internet. Additionally, there is a significant and growing demand by business and other users for increased bandwidth. Cable and Wireless Jamaica is the owner of the sole submarine carrier facility.

According to the Office of Utilities Regulation, the pricing of local and international data transmission circuits and Internet services has not been as competitive as it could be. This is contributing to lower than desired access to the Internet for the Jamaican population.

In view of the need to address Jamaica's shortage of submarine fiber-optic facilities for international telecommunications connectivity, the Minister of Commerce, Science and Technology directed the Office of Utilities Regulation (OUR) to develop a long-term policy and a regulatory framework for international cable landings in Jamaica based upon considerations of the public interest, environmental soundness and national development imperatives in a competitive market.



In response to this directive, the OUR in 2004 issued invitations requesting the submission of applications for a license to build, own and operate an additional Fiber Optic Cable Carrier Facility (FOCCF) landing on the shores of Jamaica. The construction, ownership and operation of this additional facility required specific approval and permission from the Minister. At first, the aim was to attract and promote the development of one additional service provider but this was later changed to allow more than one. Among the preliminary requirements for the additional providers would be the provision of detailed network drawings and a roll-out timetable to include important milestones such as a start-up date, completion of construction and the target launch of full service.

The provision of fiber-optic cable connectivity will have a number of technical requirements. The planned route of the cable will be subject to scrutiny with regard to matters such as its originating point, points of interconnection with other international undersea cable facilities and integration into regional networks. Important elements and required equipment will include cable landing stations, international gateways, cable, cable duct, switches and associated equipment. Consideration will have to be given towards network capacity and the potential for upgrade in the future. There will also be the need to get approval from Jamaica's National Environmental and Protection Agency (NEPA).

By the end of 2004, three entities had submitted applications for providing international submarine fiber-optic connectivity. They were (i) Trans Caribbean Cable Company (TCCC); (ii) Digicel Jamaica and (iii) FibraLink. On January 5, 2005, the Jamaican Government announced that TCCC and FibraLink were successful.

TCCC is a management organization comprised of more than 35 telecom companies for planning, building, operating, and maintaining the Trans-Caribbean Cable Network ("TCCN"). The project was conceived to service the ever-growing Internet, data and voice traffic demands of the Caribbean.

TCCN will offer high-speed undersea fiber-optic cable connectivity from many locations in the Caribbean to Miami, Florida through a combination of existing project acquisitions as well as new segment construction. TCCC envisions that TCCN will become the Caribbean region's common, carrier-neutral platform that will provide the capacity needed to stimulate the growth of the Internet and other telecom services in the region.

Members of TCCC include AT&T Wireless (now Cingular), Gotel Communications, Oceanic Digital, Digicel and Verizon, which already have a presence in Jamaica. The proposal is to provide high-speed connectivity from Jamaica via the Dominican Republic to Puerto Rico where many competitive connectivity options to Miami already exist.

FibraLink is a joint venture between Jamaican-based Merit Communications (33%) and Bahamas-based Caribbean Crossings. Fibralink plans to have two outgoing cables (one each from Jamaica's north and south coast). They will then eventually connect to infrastructure, which already exists in the Bahamas. The company plans to be functional by the end of 2005.

IMPORT MARKET ,COMPETITION AND END USERS:

The market for fiber optic cables and related equipment in Jamaica is growing, and all indications are that it will grow rapidly in the not-too-distant future. In order to appreciate the current and projected size of the market, it is important to take note of trends and also study the uses to which the material is put. It is reasonable to expect that much of the demand for fiber-optic equipment will be generated by the companies responsible for developing and maintaining submarine fiber optic facilities for international communications. These are Cable and Wireless Jamaica, and the newcomers TCCC and Fibralink. At the same time, it is important to recognize that in many circumstances, fiber optic transmission equipment is able to replace traditional copper wire as an appropriate means of communication signal transmission. This would include the long distances between local phone systems as well as providing the backbone for many network systems. Other system users might include cable television services, university campuses, office buildings, industrial plants, electric utility companies and increasingly just about any relatively large company that needs to transfer significant amounts of information quickly.

There is a growing list of Jamaican companies that are recognizing the advantages of connecting to a national fiber network. Much of the infrastructure of this is being driven by Merit Communications. Merit is building what they described as a "Next Generation" Internet infrastructure in Jamaica. The new infrastructure is expected to provide great advances in terms of capacity and is expected to support large scale, real-time multimedia services.

The Jamaican government has been making important strides in developing "E-Government". The vision is that the public will be able to interact with the government using a sophisticated IT infrastructure. In December 2004, an on-line tax payment service was launched and it is expected that as time progresses, other important phases of this initiative will be revealed. For citizens that do not have individual access to computer/IT services, plans are in place to provide a number of public access points.

The medical field appears to be set to benefit from the expected advances in telecommunications. Providing health-care services via telemedicine offers many advantages. It can make specialty care more accessible to underserved rural and urban populations. Video consultations from a rural clinic to a specialist can alleviate prohibitive travel and associated costs for patients. There are of course, also possibilities for international collaboration and consultations. Videoconferencing also opens up new possibilities for continuing education or training for isolated or rural health practitioners, who may not be able to leave a rural practice to take part in professional meetings or educational opportunities. The growth of the medical sector in Jamaica has been hampered by the lack of adequate bandwidth. The new landscape will help to address this situation. Growth of telemedicine in Jamaica will open up demand for a slew of equipment and services. For example in cardiology, this could include items such as Electronic Stethoscopes and PC-based ECG's. There will be similar specialized applications in areas such as dentistry, dermatology, ENT care, emergency medicine, home care, women's health, ophthalmology, pathology, pediatrics, primary care, radiology, vital sign monitoring and education.

According to figures from the Statistical Institute of Jamaica, Jamaica imported just over US\$1 million in fiber optic cable in 2003. The overwhelming majority of the material came from the United States with small amounts coming from European countries, Canada and Japan.



Trends noted since 2003 suggest that annual imports have been on a rapid growth path. For 2005 and beyond the trend will continue bolstered by the new licenses obtained by TCCC and FibraLink. The network that these companies will build out represents an outlay, which is expected to exceed US\$80 million before the end of 2006.

MARKET ACCESS/ENTRY:

Import duties on several items in the telecom sector have been eliminated. This includes the duties on fiber optic cable. However, a General Consumption Tax (GCT) of 15% still applies as well as a Standards Compliance Fee of 0.3%.



OPPORTUNITIES FOR PROFILE BUILDING/UPCOMING EVENTS:

Jamaica Internet Forum
Ocho Rios
Jamaica
April 14-15, 2005
<http://www.our.org.jm/internetforum2.asp>

Jamaica Computer Society Annual Conference
Montego Bay
Jamaica
October 2005
<http://www.jamaicacomputersociety.org>

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